



# Air Quality Resource Sheet



This document contains hyperlinks to online and downloadable resources. If you discover any broken links, please contact the authors at [climateandhealth@sfdph.org](mailto:climateandhealth@sfdph.org).



This resource sheet is intended to be a living document. If there are additional services or resources you think should be included, please contact the authors at [climateandhealth@sfdph.org](mailto:climateandhealth@sfdph.org).

## Contents

### Programs and Services

Emergency Services .....	2
Health Services .....	2
Information Services .....	3
Other Local and National Preparedness and Resilience Services .....	4

### Online and Downloadable Resources

Resource Type Glossary .....	5
Resources to understand the connection between climate change and public health .....	6
Resources to understand and identify the health impacts of air pollution .....	7
Resources to identify populations vulnerable to poor air quality .....	8
Resources to develop an air quality preparedness plan .....	9
Resources to stay safe during air quality emergency events .....	10
Resources to communicate climate preparedness .....	11



# Programs and Services

## EMERGENCY SERVICES

---

### 911

**Description:** 9-1-1 is the City emergency hotline for Police, Fire, and Ambulance services.

**Contact Information:**

Phone: 9-1-1

### Programs and Services

## HEALTH SERVICES

---

### Pediatric Asthma and Allergy Clinic

#### San Francisco Health Network's Chest Clinic

San Franciscans with unmanaged or undermanaged respiratory health conditions can be referred to the San Francisco Health Network's chest clinic. Chest clinic services include pulmonary evaluation, disease management, patient education, and referral to resources that provide home visits and legal aid. The Pediatric Asthma and Allergy Clinic provides similar resources, and is open to referrals through the eConsult Rubicon Link.

**Contact Information:**

Phone: (415) 206-8494

Website: <https://www.sfhealthnetwork.org/need-to-visit-a-specialist-doctor/pulmonary/>

### Children's Environmental Health Promotion program, San Francisco Department of Public Health

SFDPH's Children's Environmental Health Promotion (CEHP) program promotes conditions optimal for children's health and development. Services include environmental assessment in homes of asthma patients referred by their health care providers, education, and supplies for environmental risk factor control.

**Contact Information:**

Website: <https://www.sfdph.org/dph/EH/CEHP/default.asp>



## Programs and Services

### INFORMATION SERVICES

#### 311

3-1-1 is the City non-emergency hotline for San Francisco residents, visitors, and businesses seeking general information or to make service requests.

**Contact Information:**

Phone: 3-1-1

Website: <https://sf311.org/>

#### SF72

SF72 is operated by the San Francisco Department of Emergency Management and acts as the City's emergency information portal. This site contains guidance on how to develop an emergency preparedness plan, where to go for emergency updates, and how to connect to the City's emergency resources.

**Contact Information:**

Website: [www.sf72.org](http://www.sf72.org)

Twitter: @SF72org, @SF\_emergency

#### AlertSF Text Service

AlertSF is a text-based notification system for San Francisco's residents and visitors. AlertSF will send text alerts and information before, during, and after emergencies to registered wireless devices or email accounts.

**Contact Information:**

Patients should be encouraged to sign up for AlertSF at: <https://member.everbridge.net/index/453003085612609#/login>

Patients can also sign up for Alert SF by texting 'AlertSF' to 888-777

#### Air Quality Index

The Air Quality Index (AQI), developed by AirNow.gov, monitors concentrations of ground-level ozone, particle pollution, carbon monoxide, sulfur dioxide, and nitrogen dioxide. These concentrations are displayed as color-coded warnings. The AQI is administered by the EPA and the Bay Area Air Quality Management District (BAAQMD).

**Contact Information:**

Website: <https://airnow.gov/>

#### EPA Enviroflash

The Enviroflash air quality update is a notification system that sends email or cell phone alerts when the AQI hits a certain threshold.

**Contact Information:**

Website: <http://www.enviroflash.info/>

#### BAAQMD

The Bay Area Air Quality Management District (BAAQMD) is the Bay Area's regional air pollution control agency. BAAQMD is responsible for many regional programs and policies including 'Spare the Air' days.

**Contact Information:**

Website: <http://www.baaqmd.gov/>

#### CalFIRE

California Department of Forestry and Fire Protection, or CalFIRE, provides emergency services and acts as a steward of over 31 million acres of California's privately-owned wildlands. CalFIRE operates the statewide fire map.

**Contact Information:**

Website: <http://www.fire.ca.gov/general/firemaps>



## Programs and Services

# OTHER LOCAL AND NATIONAL PREPAREDNESS AND RESILIENCE SERVICES

### Department of Aging and Adult Services

The San Francisco Department of Aging and Adult Services coordinates services for older adults, veterans, people with disabilities, and their families to maximize safety, health, and independence. The Department of Aging and Adult Services helps clients access services and benefits, care and support (including in home supportive services) and senior and activity centers.

**Contact Information:**

Phone: (415) 557-5000

Website: <https://www.sfhsa.org/about/departments/department-aging-and-adult-services-daas>

### San Francisco Mayor's Office on Disability

The Mayor's Office on Disability (MOD) ensures that every program, service, benefit, activity, and facility operated or funded by the City and County of San Francisco is fully accessible to, and usable by, people with disabilities.

**Contact Information:**

Phone: (415) 554-6789

Website: <https://sfgov.org/mod/>

### Neighborhood Empowerment Network (NEN)

The Neighborhood Empowerment Network is an alliance of residents, neighborhood and merchant associations, nonprofits, faith-based organizations, foundations, and academic institutions that work collectively to support communities as they achieve resilience.

**Contact Information:**

Phone: (415) 554-7114

Website: <http://www.empowersf.org>

### Low Income Home Energy Assistance Program (LiHEAP)

LiHEAP is a federally funded program overseen by the California Department of Community Services and Development that can help with residential utility bill payment, emergency assistance during energy-related crises, and home weatherization. San Francisco residents may apply for utility payment assistance and energy efficiency services with Central Coast Energy Services. Central Coast Energy Services is providing LiHEAP services on an interim basis until a permanent provider is identified.

**Contact Information:**

Utility Payment Assistance:

(415) 749-5600

Emergency Services: (415) 749-5600

Energy Efficiency & Weatherization

Services: (415) 749-5600

Application: <https://www.caliheapapply.com>

### Low Income Weatherization Program (LiWP)

For low income patients in single family or mobile homes, LiWP will help homeowners and renters lower their monthly utility bills. This program is funded by the California Climate Investments Initiative. The local administrator for LiWP is Build It Green.

**Contact Information:**

Phone (Build it Green): 833-609-5190

Website: <https://betterhomeliwp.org/>



# Online and Downloadable Resources

## RESOURCE TYPE GLOSSARY



### Issue Summary Document

Issue Summary Documents provide a high-level, comprehensive overview of the particular issue. An Issue Summary Document is as an informational resource to facilitate the development of informed resilience and preparedness strategies.



### Outreach and Engagement

Outreach and Engagement materials are short documents that graphically and concisely convey information for the purpose of educating patients. These resources include posters, infographics, and other media.



### Guidance Document

Guidance Documents are explanatory manuals to instruct users how to implement resilience and preparedness strategies. These resources include checklists and toolkits.



### News Article

News Articles are resources that summarize current events and synthesize relevant research.



### Research

Research resources include academic journals, City-developed plans and reports, and other evidenced-based documents.



## Online and Downloadable Resources

# RESOURCES TO UNDERSTAND THE CONNECTION BETWEEN CLIMATE CHANGE AND PUBLIC HEALTH



### Issue Summary Document

## Center for Climate Change and Public Health, A Physician's Guide to Climate Change, Health and Equity

**Audience:** Clinicians

This resource explores the connection between climate change and public health, and opportunities for physicians to strengthen their voice as climate advocates. Relevant chapters include: 'Drought, Climate Change, and Health', 'Allergens, Climate Change and Health', 'Wildfires, Climate Change, and Health', and 'Air Quality, Climate Change, and Health'.

**Hyperlink:**

<http://climatehealthconnect.org/resources/physicians-guide-climate-change-health-equity/>



### Issue Summary Document

## Center for Climate Change and Health, Climate and Health Posters

**Audience:** Clinicians, Patients

These 18 x 24 posters were developed by the Center for Climate Change and Health. The posters were developed to help make the connections between climate change and public health. Relevant posters include 'Climate Change, Asthma, & You', 'Climate Change, Allergies, & You', and 'Climate Change & Heart Health'.

**Hyperlink:**

<http://climatehealthconnect.org/resources/posters/>



### Research

## U.S. Global Change Research Program, 2018 Climate and Health Assessment: Air Quality

**Audience:** Clinicians, Patients

The 2018 National Climate Assessment chapter on air quality impacts identifies how climate change affects ground-level ozone and particulate matter. The section on the health impacts of climate change states that, "Unless counteracting efforts to improve air quality are implemented, climate change will worsen existing air pollution levels. This worsened air pollution would increase the incidence of adverse respiratory and cardiovascular health effects, including premature death".

**Hyperlink:**

<https://nca2018.globalchange.gov/chapter/13/>



### Outreach and Engagement

## BARHII, Climate Change Quick Guides

**Audience:** Patients

These five short guides explore public health as an equity issue and examine the environmental and health co-benefits of climate change action.

**Hyperlink:**

<http://barhii.org/resources/climate-change-quick-guides>



### Issue Summary Document

## Asthma and Allergy Foundation of America, Extreme Allergies and Climate Change

**Audience:** Clinicians

This report explores the effect of climate change on allergies in the United States. Specifically, this report looks at how climate change will impact the development of pollens, ragweed, and other allergens.

**Hyperlink:**

<https://www.aafa.org/media/1634/extreme-allergies-global-warming-report-2010.pdf>



## Online and Downloadable Resources

**RESOURCES TO UNDERSTAND AND IDENTIFY THE HEALTH IMPACTS OF AIR POLLUTION**

Outreach and Engagement, PDF

**EPA, Effects of Common Air Pollutants****Audience:** Patients

This infographic identifies respiratory and cardiovascular effects of air pollution.

**Hyperlink:**

<https://www3.epa.gov/airnow/health-prof/common-air-pollutants-2011-lo.pdf>



Outreach and Engagement

**Air Now, How Smoke from Fires Can Affect Your Health****Audience:** Patients

This online resource identifies vulnerable populations, and best practices to prepare for fire season, and staying safe during wildfire smoke events.

**Hyperlink:**

<https://www.airnow.gov/index.cfm?action=smoke.index>



Outreach and Engagement

**CDC, Respiratory Health Factsheets****Audience:** Patients

These respiratory health factsheets, available in many languages, include information on asthma, COPD, heart disease, and children's respiratory health.

**Hyperlink:**

[https://www.cdc.gov/air/air\\_health.htm](https://www.cdc.gov/air/air_health.htm)



Issue Summary Document

**American Public Health Association, Making the Connection: Climate Change, Allergies, and Asthma****Audience:** Clinicians, Patients

This two-page document explains the relationship between climate change and allergens and the health impacts of this relationship.

**Hyperlink:**

[https://www.apha.org/~media/files/pdf/topics/climate/asthma\\_allergies.ashx](https://www.apha.org/~media/files/pdf/topics/climate/asthma_allergies.ashx)



Issue Summary Document

**California Air Resources Board, Common Air Pollutants****Audience:** Clinicians, Patients

This California Air Resources Board (CARB) document has detailed information on the specific health and environmental impacts of common air pollutants.

**Hyperlink:**

<https://ww2.arb.ca.gov/resources/common-air-pollutants>



Guidance Document, PDF

**EPA, Wildfire Smoke: A Guide for Public Health Officials****Audience:** Clinicians

This guidance document explores best practices for public health departments to prepare for and respond to the health impacts of wildfire smoke. Guidance includes strategies to reduce smoke exposure, communication tools, and identification of sensitive populations.

**Hyperlink:**

[https://www3.epa.gov/airnow/wildfire\\_may2016.pdf](https://www3.epa.gov/airnow/wildfire_may2016.pdf)



News

**FiveThirtyEight, California's Wildfire Could Mean a Generation of Lung Problems****Audience:** Clinicians, Patients

This November 2018 news article reviews current research into the health impacts of air quality events, especially on children exposed to wildfire smoke.

**Hyperlink:**

<https://fivethirtyeight.com/features/californias-wildfires-could-mean-a-generation-of-lung-problems/>



News

**New York Times, Exposure to Air Pollution in Womb Tied to Hypertension in Children****Audience:** Clinicians, Patients

This May 2018 news article reviews a study that measured air pollution exposure to pregnant women and its relationship with hypertension in children.

**Hyperlink:**

<https://www.nytimes.com/2018/05/17/well/family/exposure-to-air-pollution-in-womb-tied-to-hypertension-in-children.html>



## Online and Downloadable Resources

# RESOURCES TO IDENTIFY POPULATIONS VULNERABLE TO POOR AIR QUALITY

---



### Issue Summary Document

## American Lung Association, “Air Pollution: Who is At Risk?”

---

**Audience:** Patients

This American Lung Association website identifies and explains how different communities are vulnerable to the health impacts of air pollution.

**Hyperlink:**

<https://www.lung.org/our-initiatives/healthy-air/outdoor/air-pollution/who-is-at-risk.html>





## Online and Downloadable Resources

# RESOURCES TO DEVELOP AN AIR QUALITY PREPAREDNESS PLAN



### Guidance Document

## SF72 Emergency Plan Checklists

**Audience:** Patients

From the San Francisco Department of Emergency Management, this site links to downloadable multilingual emergency planning checklists.

**Hyperlink:**

<https://www.sf72.org/plan>



### Outreach and Engagement

## Ready.Gov, Wildfires: Are You Prepared?

**Audience:** Patients

This resource consolidates information about how to prepare for, stay safe during, and respond to wildfire events. This website also provides links to content to further explore wildfire preparedness best practices.

**Hyperlink:**

<https://www.ready.gov/wildfires>



### Outreach and Engagement

## EPA, Caja de herramientas

**Audience:** Patients (Spanish)

All of the EPA Wildfire Factsheets translated into Spanish.

**Hyperlink:**

<https://espanol.epa.gov/espanol/caja-de-herramientas-smoke-ready-listo-para-el-humo-para-incendios-forestales>



### Outreach and Engagement

## EPA, Wildfire Smoke Factsheet: Prepare for Fire Season

**Audience:** Clinicians, Patients

This two-page EPA factsheet identifies best practices for residents to stay safe before and during and wildfire events.

**Hyperlink:**

[https://www.epa.gov/airnow/smoke\\_fires/prepare-for-fire-season-508.pdf](https://www.epa.gov/airnow/smoke_fires/prepare-for-fire-season-508.pdf)



## Online and Downloadable Resources

# RESOURCES TO STAY SAFE DURING AIR QUALITY EMERGENCY EVENTS



Guidance Document, PDF

### EPA, Wildfire Smoke Factsheet: Reduce Your Smoke Exposure

**Audience:** Clinicians, Patients

This two-page factsheet provides guidance on how to reduce exposure to wildfire smoke indoors, and how to reduce exposure to wildfire smoke outdoors. Links include how to find certified air cleaning devices and how to use an N95 mask./reduce-your-smoke-exposure

**Hyperlink:**

[https://www3.epa.gov/airnow/smoke\\_fires/reduce-your-smoke-exposure.pdf](https://www3.epa.gov/airnow/smoke_fires/reduce-your-smoke-exposure.pdf)



Guidance Document, PDF

### EPA, Wildfire Smoke Factsheet: Protecting Children From Smoke and Ash

**Audience:** Clinicians, Patients

This two-page factsheet has information on the health effects of smoke and ash, best practices to protect children before wildfires, and resources after wildfires to help children after wildfire events.

**Hyperlink:**

<https://www.epa.gov/sites/production/files/2018-11/documents/protecting-children-from-wildfire-smoke-and-ash.pdf>



Guidance Document, PDF

### EPA, Wildfire Smoke Factsheet: Protect Your Lungs From Wildfire Smoke

**Audience:** Clinicians, Patients

This factsheet provides guidance on 1) when to use a respirator; 2) how to choose the correct respirator, and; 3) possible risks.

**Hyperlink:**

[https://www3.epa.gov/airnow/smoke\\_fires/respiratory-protection-508.pdf](https://www3.epa.gov/airnow/smoke_fires/respiratory-protection-508.pdf)



## Online and Downloadable Resources

# RESOURCES TO COMMUNICATE CLIMATE PREPAREDNESS



Issue Summary Document, PDF

## Center for Climate Change and Health, A Physician's Guide to Climate Change, Health, and Equity

**Audience:** Clinicians

This comprehensive resource explores the connection between climate change and public health, and opportunities for physicians to strengthen their voice as climate advocates.

**Hyperlink:**

<http://climatehealthconnect.org/resources/physicians-guide-climate-change-health-equity/>



Issue Summary Document, PDF

## EcoAmerica, Let's Talk Health and Climate: Communication Guidance for Health Professionals

**Audience:** Clinicians

This guidance document, developed by ecoAmerica and Climate for Health, synthesizes academic research to provide message tested phrases and talking points to advance climate health communications.

**Hyperlink:**

[https://ecoamerica.org/wp-content/uploads/2017/03/3\\_letstalk\\_health\\_and\\_climate.pdf](https://ecoamerica.org/wp-content/uploads/2017/03/3_letstalk_health_and_climate.pdf)



Research

## U.S. Forest Service, Wildland Fire / Air Quality Tools

**Audience:** Clinicians

The U.S. Forest Service Pacific Wildland Fire Sciences Laboratory has created a suite of tools to provide information on wildfires and air quality. These tools are relatively academic and including smoke visualization and modeling and other climatology resources.

**Hyperlink:**

<https://sites.google.com/firenet.gov/wfaqrp-airfire-tools/>